

REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action dated April 13, 2004. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

Claims 1, 3-8, 10-15, and 17-26 are under consideration. As outlined above, claims 2, 9, and 16 are being cancelled without prejudice or disclaimer. Claims 1, 7 and 15 are being amended to correct formal errors and to more particularly point out and distinctly claim the subject invention. New claims 24-26 are being added to recited the feature originally recited in claim 1. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Prior Art Rejections

Claims 1-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,147,725 to Yuuki et al (hereinafter "Yuuki"), in view of JP 09-258030 by Kayoko et al. (hereinafter "Kayoko"). This rejection has been carefully considered, but is most respectfully traversed.

The liquid crystal display device of the invention (e.g., Fig. 1), as now recited in claim 1, comprising: a liquid crystal panel having a display area AR; a backlight being disposed at a rear side surface of the liquid crystal panel; and a diffusing sheet and a prism sheet lying between the rear side surface of the liquid crystal panel and the backlight. The backlight is provided by a substantially rectangular-shaped light guide plate GLB and a linear lamp LP being disposed along an incidence plane provided at one side of the light guide plate GLB. A light emission control pattern THR having a plurality of grooves slanted to one side of the light guide plate GLB and formed at a corner portion of the side of the light guide plate GLB on a back surface (e.g., Fig. 3) except for a center portion of the light guide plate GLB. The plurality of the grooves overlap with the display area AR of the liquid crystal panel (e.g., Fig. 2).

The invention is also directed to a liquid crystal display device, as now recited in claim 7, comprising: a liquid crystal display panel having a display area; a backlight; and an

optical sheet disposed between the liquid crystal panel and the backlight. The backlight is provided by a light guide plate display panel and a linear lamp being disposed along at least one side of the light guide plate. A plurality of grooves are formed on a back surface of the light guide plate and formed at a corner portion of the side except for a center portion of the light guide plate. The plurality of grooves overlap with the display area.

The invention is also directed to a liquid crystal display device, as now recited in claim 15, comprising: a liquid crystal display panel having a display area; a light guide plate; and a linear lamp disposed along one side of the light guide plate. The back surface of the light guide plate has a plurality of first grooves and a plurality of second grooves formed at both corner areas along the side of the light guide plate except for a center portion of the light guide plate. The plurality of first grooves are extended in a first direction slanted to the side of the light guide plate and the plurality of second grooves are extended in a second direction slanted to the side of the light guide plate. The plurality of first and second grooves overlap with the display area of the liquid crystal panel.

As such, the invention effectively prevents the corner brightness reduction caused by the narrowed picture frame (p. 6, 1st paragraph).

None of the cited references teaches or suggests such a “plurality of the grooves, which are formed on the corner portion (but absent from the center portion) of the back surface of a light guide plate, overlapping with the display area of the liquid crystal panel” as the invention.

As admitted by the Examiner (p. 3, end of 1st paragraph of the outstanding office action), Yuuki fails to disclose a plurality of grooves on a back surface of a light guide plate except for a center portion of the light guide plate. Fig. 14 of Kayoko was relied upon by the Examiner to compensate for such a deficiency. However, Kayoko’s plurality of light diffusion members 14, 22 (the alleged grooves) are formed at the corners of the **front and side** surfaces of the light guide plate 11 (Figs. 3-6 and 12-14), rather than the **back** surface. These light diffusion members 14, 22 are made by a white PET (polyethylene terephthalate) film, i.e., an additional non-transparent reflection sheet including with light diffusion ink, on the surface of the light guide plate 11, which are essentially different from the grooves integrated made in the transparent light guide plate GLB of the invention. Moreover, Kayoko’s diffusion members 22 formed on the top surface of the light guide plate 11 do NOT overlaps with the display area so as to avoid blocking light in the display area (Figs. 3-6 and 12-14).

There is simply no teaching of providing a plurality of Yuuki grooves formed only on the corner portion (but not the center portion) of the back surface of a light guide plate. One skilled in the art would not make such a light guide plate as claimed by the Applicants based on the above prior art teachings except by using Applicants' invention as a blueprint. The most intuitive way to combine Yuuki and Kayoko is to have both Yuuki grooves formed all over the back surface of a light guide plate and Kayoko's light diffusion members 14, 22 formed only at the corners of the front and side surfaces of the light guide plate. Applicants will point out that a rejection based on hindsight knowledge of the invention at issue is improper.

Although the invention applies grooves similar to disclosed in Yuuki, the invention applies the mechanism on only on the corner portion (but not the center portion) of the back surface of a light guide plate, rather than all over the back surface, to achieve unexpected results or properties. For example, to prevent the corner brightness reduction caused by the narrowed picture frame. The presence of the unexpected properties is evidence of nonobviousness. MPEP§716.02(a).

"Presence of a property not possessed by the prior art is evidence of nonobviousness. In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) (rejection of claims to compound structurally similar to the prior art compound was reversed because claimed compound unexpectedly possessed anti-inflammatory properties not possessed by the prior art compound); Ex parte Thumm, 132 USPQ 66 (Bd. App. 1961) (Appellant showed that the claimed range of ethylene diamine was effective for the purpose of producing " 'regenerated cellulose consisting substantially entirely of skin' " whereas the prior art warned "this compound has 'practically no effect.' ").

Although "[t]he submission of evidence that a new product possesses unexpected properties does not necessarily require a conclusion that the claimed invention is nonobvious. In re Payne, 606 F.2d 303, 203 USPQ 245 (CCPA 1979). See the discussion of latent properties and additional advantages in MPEP § 2145," the unexpected properties were unknown and non-inherent functions in view of Yuuki, since Yuuki does not inherently achieve the same results. In other words, these advantages would not flow naturally from

following the teachings of Yuuki, since Yuuki fails to suggest forming the grooves only on the corner portion (but not the center portion) of the back surface of a light guide plate.

Applicants further contend that the mere fact that one of skill in the art could rearrange Yuuki's grooves to meet the terms of the claims is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for one skilled in the art to provide the unexpected properties, such as preventing the corner brightness reduction caused by the narrowed picture frame, without the benefit of appellant's specification, to make the necessary changes in the reference device. *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984). MPEP§2144.04 VI C.

Applicants contend that neither Yuuki, Kayoko, nor their combination teaches or discloses each and every feature of the present invention as disclosed in independent claims 1, 7 and 15. As such, the present invention as now claimed is distinguishable and thereby allowable over the rejections raised in the Office Action. The withdrawal of the outstanding prior art rejections is in order, and is respectfully solicited.

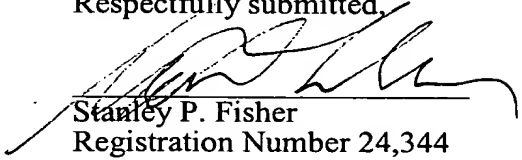
Conclusion

In view of all the above, clear and distinct differences as discussed exist between the present invention as now claimed and the prior art reference upon which the rejections in the Office Action rely. Applicant respectfully contends that the prior art references cannot anticipate the present invention or render the present invention obvious. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance

of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and phone number indicated below.

Respectfully submitted,



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